



SAN LUIS OBISPO COUNTY DEPARTMENT OF PLANNING AND BUILDING

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DRAFT **County of San Luis Obispo** **Guidelines for Mitigation and Monitoring Plans** Revised June 20, 2006

I. Applicability

These guidelines are for biologists preparing Mitigation and Monitoring Plans (MMPs) for the County of San Luis Obispo Planning and Building Department. These guidelines do not supersede existing Federal or State laws or regulations.

II. Purpose

The purpose of these Mitigation and Monitoring Guidelines is to assist applicants in understanding the County requirements for MMPs, to improve the overall success of MMP proposals, to improve the predictability of MMPs, and to provide for more consistency in the contents of MMPs. The guidelines are intended to be used by applicants, agents, and consultants as a guide for the development of compensatory mitigation plans as required to minimize adverse impacts to sensitive resources. These guidelines may not be suitable in every situation, and do not guarantee the success of a mitigation project. These guidelines are intended to provide background information that may be assimilated in MMPs; however, the actual details required in an MMP needed for a particular project may vary, depending on the site conditions, project scope, and sensitive resources that require mitigation.

III. Definitions and General Information

Adaptive Management is defined as necessary changes to mitigation and monitoring plans that are implemented when monitoring indicates that mitigation objectives and goals are not being met through current management practices.

Compensatory mitigation is defined as the restoration, enhancement, creation, or preservation of sensitive resources in order to compensate for unavoidable impacts. Acceptable mitigation options may also include mitigation banking and in-lieu fee arrangements approved by the County. Project managers will work with applicants to determine suitable options on a case-by-case basis.

Mitigation and Monitoring Plan is defined as a plan to mitigate or compensate for the loss of sensitive biological resources resulting from discretionary project activities and monitor over time, the success of the mitigation plan.

Performance standards are specific, measurable outcomes that will be used to track progress towards achieving the approved success criteria. The development of performance standards is a required element in an MMP. Applicants and consultants shall coordinate with the County early in the MMP development to develop performance standards and they shall be consistent with the intended mitigation goals and objectives.

Replacement Ratio: MMPs should be developed to replace impacted sensitive resources at a minimum 1:1 replacement ratio (i.e. no net loss). This replacement ratio may be increased depending on the type of resource, the percentage of the total resource that is lost due to the project activities, the likelihood of success, timing, location, and type of proposed mitigation.

Approval of MMPs: MMPs should include a discussion of how on-site impacts were avoided and minimized and how the proposed compensatory mitigation will compensate for the remaining unavoidable impacts. A preliminary MMP shall be submitted to the Environmental Coordinator's Office of the County Department of Planning and Building for review. The County shall review the preliminary MMP to ensure that the MMP appropriately compensates for the unavoidable impacts. The final MMP will be completed, incorporating the County's comments.

Coordination: Coordination meetings are encouraged to facilitate the evaluation of potentially complex or controversial projects and discuss mitigation requirements and opportunities. In addition, coordination meetings between contractors, environmental consultants, and the project manager are encouraged for larger, more complex, and/or higher risk mitigation projects to ensure proper compliance.

IV. Mitigation and Monitoring Plan Checklist (Appendix A).

Appendix A is a checklist intended to serve as a guide for applicants preparing compensatory MMPs to offset impacts from discretionary projects. The checklist identifies the items generally required when developing compensatory MMPs. Not every MMP will require each item on the checklist; however, applicants should address all applicable items and indicate, when appropriate, why a particular item was not included.

V. Contents of Mitigation and Monitoring Plan

Refer to Appendix A for a checklist of Compensatory MMPs. The checklist should be used prior to submittal of MMPs to ensure that all required items are included.

- A. Executive Summary
 - 1. Describe impacted resources and proposed resources
 - 2. Project goals and objectives
 - 3. Schedule summary
- B. Baseline Information for Impact site, proposed mitigation sites and reference sites (if applicable)
 - 1. Description of discretionary project that requires mitigation
 - Describe the project type (e.g. parcel map, tract map, grading permit, etc.),
 - Describe project phases
 - Describe project schedule
 - Include total area of disturbance
 - Include conditions of approval as they relate to the MMP
 - 2. Location

For the impact site, mitigation site, and reference site (if applicable), describe the following characteristics:

- Assessor's parcel number (i.e. APN)
- Address
- Location description

- Township and range coordinates and/or Global Positioning System (GPS) coordinates.
 - Include maps (e.g., vicinity map, site map showing project plans, USGS map, zoning or planning maps, etc.)
 - Aerial and on-site photos
3. Environmental Setting of impact, mitigation, and reference sites
- Climate/aspect
 - Configuration and topography
 - Soils testing and description
 - Watershed
 - Existing hydrology (surface and groundwater)
 - Quantify wetland resources (acreage) or stream resources (linear feet) by type(s).
 - Water quality
 - Existing vegetation/habitats (descriptions and maps)
 - List of species on site, indicating dominant species
 - Species characteristics such as densities, general age and health, and native/nonnative/invasive status
 - Percent vegetative cover; community structure (canopy stratification)
 - Existing wildlife usage (indicate possible threatened and endangered species habitat)
 - Map showing location of plant communities
 - For mitigation sites, also describe level of existing disturbance, exotic invasive species presence, and site constraints (e.g. zoning, current uses, surrounding uses, etc.)
4. Land Use and Ownership
- Current owner(s)
 - Historic and current land use; note prior converted cropland
 - Surrounding land use
5. Parties responsible for project
6. Required permits from non-county agencies
- Describe permits required by other agencies such as the Department of Fish and Game, Army Corps of Engineers, etc., and when permits will be obtained.
 - If cultural or historical resources be impacted, discuss whether a letter is needed by the State Historic Preservation Office. Explain how and when this will be accomplished.

C. Mitigation Goals and Objectives

- Describe the resource type and functions that will be impacted at the proposed impact site and the resource and functions for which the mitigation project is intended to compensate.
- Include both temporary and permanent impacts
- Describe how the impact site contributes towards overall regional functions.
- Describe the contribution of the overall regional functions that the mitigation site(s) is intended to provide.
- Include attainable and measurable goals and objectives to achieve through implementation of the MMP.

- Description of mitigation type(s) (i.e. restoration, enhancement, creation, or preservation), acreage(s) and proposed compensation ratios
 - Proposed compensation ratios
 - Describe time frame for accomplishing goals and objectives
- D. Mitigation Site Selection and Justification
- Description of site selection practicability in terms of cost, existing technology, and logistics
 - Description of likelihood of success, future adjacent land uses and compatibility (show on map or aerial photo)
 - If the proposed mitigation is off-site and/or out-of-kind, explain why on-site or in-kind options are not practicable or environmentally preferable.
 - Existing and proposed mitigation site deed restrictions, easements and rights-of-way. Demonstrate how the existence of any such restriction will be addressed, particularly in the context of incompatible uses.
 - Explanation of how the design is sustainable and self-maintaining
- E. Mitigation Work Plan
- Work plan should include specific details so that work can be accomplished by secondary party, if necessary. Methodologies should be repeatable.
 - Responsible party(ies)
 - Maps marking boundaries of proposed mitigation sites and reference sites; include GPS coordinates
 - Timing of mitigation (before, concurrent or after authorized impacts). If mitigation is not in advance or concurrent with impacts, explain why it is not practicable and describe other measures to compensate for the consequences of temporal losses.
 - MMP schedule (expected start and end dates of each phase, expected date for finished plan)
 - Protections to be implemented for extant vegetation, hydrologic features, and landforms
 - Description of MMP methods (e.g., equipment to be used)
 - Describe land shaping, grading, drainage. Include planned elevation, slopes, hydrology, soils, vegetation, plant species, etc.
 - Include grading plan, if applicable
 - Slope protection, erosion control, and soil compaction control measures
 - Planned soils/substrate/growth media
 - Testing
 - Source of soils (e.g., salvaging existing soil, stockpiling, replacing or importing)
 - Soil characteristics (organic content, structure, texture, permeability)
 - Soil amendments (e.g., organic material or topsoil)
 - Mulching
 - Weed eradication from soil source

- Plant materials
 - Species selection
 - Stock type (bare root, potted, seed)
 - Plant age(s)/size(s)
 - Quantities of each species and stock type
 - Propagule source (e.g. salvaged from impact site, local source, seed bank, commercial)
 - Plant/seed handling
 - Planting/seeding rates, densities, spacing, percent cover
 - Planting/seeding methods (details)
 - Planting/seeding locations (include description and show locations on map)
- Expected natural regeneration from existing seed bank, plantings, and natural recruitment
- Plant protection (e.g. Chan can, screens, Weedstop)
- Irrigation installation (frequency, duration, source and water quality)
- Planned habitat features (identify large woody debris, rock mounds, etc. on map)
- Other planned features, such as interpretive signs, trails, fence(s)
- Planned buffer (identify on map)
 - Evaluation of the buffer's expected contribution to resource functions
 - Physical characteristics (location, dimensions, native plant composition, spatial and vertical structure etc.

F. Site Protection and Maintenance

- Describe long-term legal protection instrument (e.g. conservation easement, deed restriction, transfer of title).
- Party(ies) responsible for site protections and their role (e.g. property owner, easement owner, maintenance implementation). If more than one party, identify primary party.
- Schedule of maintenance activities
- Maintenance plan
 - Measures to control predation/grazing
 - Invasive species control plan (plant and animal)
 - Fertilizing
 - Irrigation/supplemental watering
 - Replanting
 - Control of anthropogenic effects (e.g. fencing, signing, replacement planting, structure maintenance/repair, etc.)
- Evaluation and reporting of maintenance activities

G. Performance Standards

- Identify clear, precise, quantifiable parameters that can be used to evaluate the status of MMP in attaining desired objectives. These may include hydrological, vegetative, and faunal and soil measures. (e.g., plant richness, percent exotic/invasive species, water inundation/saturation levels).
- Performance standards must address project goals.
- Describe how performance standards will be used to verify that objectives identified in section V.C. have been attained.
- Describe when performance standards will be evaluated.
- Set target values or ranges for the parameters identified.

H. Monitoring Plan

- Include professional, certified, plans of mitigation plan work efforts with elevations and acreage. Explanations of any deviations from the approved MMP shall be provided. Plans should be certified by a professional engineer, accredited professional landscape architect, or licensed surveyor.
- Party(ies) responsible for monitoring. If more than one, identify primary party
- Monitoring schedule
- Description of monitoring methods: data to be collected and reported, how often and for what duration. Identify proposed monitoring stations, including transect locations on map. Include specific details so that monitoring can be repeated by secondary party, if necessary.
- Discussion of methods for analyzing results
- Identify locations of photo stations and transects on map
- Include photographs from stations
- Reporting monitoring data and assessing mitigation status
 - Report format
 - Report contents
 - Frequency/schedule of reports

I. Adaptive Management Plan

- Describe party(ies) responsible for adaptive management and their responsibilities
- Identification of potential challenges (e.g., flooding, drought, invasive species, seriously degraded site, extensively developed landscape) that pose a risk to project success. Discuss how the design accommodates these challenges.
- Discussion of potential remedial measures in the event mitigation does not meet performance standards in a timely manner
- Discussion of how and when adaptive management practices will be applied to the plan
- Identify party(ies) to consult when goals and objectives are not attained.

J. Budget

- Include estimated costs associated with
 - Planning MMP
 - Implementation of MMP
 - Maintenance
 - Monitoring
 - Contingencies

K. Financial Assurances

- For each of the following, identify party(ies) responsible to establish and manage the financial assurance, the specific type of financial instrument, the method used to estimate assurance amount, the date of establishment, and the release and forfeiture conditions:
 - Construction phase
 - Maintenance
 - Monitoring
 - Adaptive Management
 - Project success

- Describe types of assurances (e.g., performance bonds, irrevocable trusts, escrow accounts, casualty insurance, letters of credit, etc.).
- Payees/designated appropriate use of funds
- Schedule by which financial assurance will be reviewed and adjusted to reflect current economic factors

K. Data sheets

- Include copies of data sheets for baseline data
- Include copies of monitoring forms
- Monitoring results

L. Monitoring Reports

- Include part(ies) responsible for submission of monitoring reports.
- Include schedule for submission of quarterly and annual monitoring reports.
- Include details about contents of monitoring reports.

Appendix A
Compensatory Mitigation and Monitoring Plan Checklist
Revised June 20, 2006

Executive Summary

- ☐ Impacted resources vs. resources proposed
- ☐ Project goals
- ☐ Schedule Summary

Baseline Information for Impact Site, Proposed Mitigation Sites, and Reference Sites

- ☐ Project description for discretionary project that requires mitigation (type, phases, schedule, quantify disturbance area). Include proposed project site plan, topographic maps, and aerial photographs
- ☐ Location of impact site, mitigation site, and reference sites (location description and site plan, APN, GPS coordinates, maps, photos, etc.)
- ☐ Provide data on environmental setting of sites (climate, topography, soils, watershed, hydrology, wetlands, water quality, plant communities, vegetation, habitat, wildlife species, level of existing disturbance, etc.)
- ☐ Describe historic and existing land uses and resources impacted
- ☐ Describe surrounding land use
- ☐ Land ownership
- ☐ Responsible parties
- ☐ Required permits from non-county agencies

Mitigation Goals and Objectives

- ☐ Describe functions/resources lost at impact site
- ☐ Describe functions/resources to be gained at mitigation site
- ☐ Include attainable and measurable goals and objectives
- ☐ Relationship to mitigation measures required for project
- ☐ Describe mitigation types
- ☐ Proposed mitigation ratios
- ☐ Time frame for accomplishing goals and objectives

Mitigation Site Selection and Justification

- ☐ Describe process of selecting proposed site
- ☐ Likelihood of success, future land use compatibility, etc.
- ☐ Explain reason for selecting off-site mitigation (if applicable)
- ☐ Explain why on-site mitigation is not possible (if applicable)
- ☐ Describe site restrictions

Mitigation Work Plan

- ☐ Include specific details of all aspects of mitigation work
- ☐ Responsible parties
- ☐ Maps showing boundaries of mitigation and reference sites
- ☐ Timing and schedule
- ☐ Describe land shaping, grading, drainage, etc.
- ☐ Describe planned elevation, slopes, hydrology, soils, buffers, vegetation, plant and wildlife species, habitat features, signs, etc.
- ☐ Describe slope protection, erosion control, and soil compaction measures

- ☐ Planned soils information
- ☐ Plant materials information
- ☐ Plant protection
- ☐ Irrigation installation
- ☐ Habitat features
- ☐ Other features
- ☐ Buffers

Site Protection and Maintenance

- ☐ Provide evidence of long-term protective measures
- ☐ List parties and responsibilities
- ☐ Maintenance schedule
- ☐ Predation/grazing control plan
- ☐ Invasive species control plan
- ☐ Control of anthropogenic effects
- ☐ Evaluation and reporting maintenance activities

Performance Standards

- ☐ Identify precise, measurable parameters to determine success of mitigation plan. Performance standards must address project goals.
- ☐ Describe performance standards for each project element.
- ☐ Describe how performance standards were derived.
- ☐ Identify how and when performance standards will be evaluated.

Monitoring Plan

- ☐ Submit professional, certified drawings of MMP work efforts
- ☐ Identify party(ies) and responsibilities
- ☐ Monitoring schedule
- ☐ Describe monitoring methods. Include specific details so that monitoring data collection can be repeated by secondary party, if necessary.
- ☐ Specify data to be collected, including assessment tools and methodologies. Include specific details so that monitoring data collection can be repeated by secondary party, if necessary
- ☐ Identify photo station and transect locations
- ☐ Reporting monitoring data and assessing MMP status.

Adaptive Management Plan

- ☐ Identify party(ies) and responsibilities
- ☐ Identify potential challenges (e.g. flooding, drought, invasive species, etc.)
- ☐ Remedial measures to implement in the event that performance standards are not met
- ☐ Identify when and how success criteria will be evaluated
- ☐ Identify how and when adaptive management practices will be applied to the plan
- ☐ Identify party(ies) to consult when goals and objectives are not attained.

Budget

- ☐ Include estimated costs for MMP planning, implementation, maintenance, monitoring, and contingencies

Financial Assurances

- ☐ Identify party(ies) responsible for assurances

- ☐ Specify type of assurances (e.g. performance bonds, irrevocable trusts, escrow accounts, etc.)
- ☐ Schedule for reviewing financial assurances

Data Sheets

- ☐ Include copies of data sheets for baseline data
- ☐ Copies of monitoring forms
- ☐ Monitoring results

Monitoring Reports

- ☐ Include party(ies) responsible for submission of monitoring reports
- ☐ Include schedule for submission of quarterly and annual monitoring reports
- ☐ Include details about contents of monitoring reports